



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,960	02/20/2004	Thomas A. Petersen	MIPS.0187-02-US	4828
23660 7590 04/18/2008 HUFFMAN LAW GROUP, P.C. 1900 MESA AVE. COLORADO SPRINGS, CO 80906				
EXAMINER				
PORTKA, GARY J				
ART UNIT		PAPER NUMBER		
2188				
NOTIFICATION DATE		DELIVERY MODE		
04/18/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO@HUFFMANLAW.NET

Office Action Summary

Application No.

10/783,960

Applicant(s)

PETERSEN ET AL.

Examiner

Gary J. Portka

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-29, 43-64, 70-72 and 74-93 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-29, 43-64, 70-72 and 74-93 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 72 and 83 have been amended by Applicant. Claims 11-29, 43-64, 70-72, and 74-93 are pending.

Response to Arguments

2. Applicant's arguments filed January 21, 2008 have been considered but are not persuasive. Applicants have argued that Hass does not assign a global order to one or more requests, or issuing snoops corresponding to the requests in that order. Similar arguments are made regarding Neiger. First, the relevant claims allow the possibility that there is one request, and where if it is assumed that the claimed invention provides for assigning an order to one request, it must follow that one request in the references also may be seen as assigned a global order (it is the only considered request, and thus next). Second, in Hass the global snoop controller is specifically described as receiving a request and then issuing a snoop for that request on the snoop ring. Since the possibility that another request somehow overtakes and its corresponding snoop is somehow issued earlier than a preceding request is not described, it is reasonable to infer that the snoops are done in the order received by the global snoop controller, which may be seen as the recited assigned global order. Applicants have argued regarding the statement that limitations of dependent claims are disclosed or inherent, but these limitations as stated are known operations such a system is capable of performing, as evidenced in already cited sections.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 11-29, 43-64, 70-72, and 74-93 are rejected under 35 U.S.C. 102(e) as being anticipated by Hass et al., US 6,892,282 B2, herein "Hass".

5. As to claims 11-12, 43-48, 50, 52-58, 61-64, 70-72, 74-82, Hass discloses a microprocessor based system, multiphase protocol, method for coherence among agents that share a memory, medium with instructions that enable a processor, and memory controller that receives memory requests, assign a global order thereto, execute snoops therefor according to the global order, and respond thereto according to the global order. See Figs. 1-3 and 6, col. 4 line 49 to col. 5 line 67, col. 11 line 40 to col. 12 line 40, col. 17 lines 42-61, and col. 18 lines 34-46. The second tier cache functions of Hass may be considered a part of the functions of the claimed global arbiter (along with those of the global snoop controller of Hass). The second tier cache receives requests and orders those requests via the input queues shown in Fig. 6. Since snoops for those requests are then placed on the snoop ring by the global snoop controller, those snoops remain in the order established for the requests, and thus the

responses are also in the same order. A memory controller as recited in claim 11 is an inherent function of memory 26. Request, snoop, and response phases of claim 43 are shown in Fig. 2, while disparate fabrics involves a statement of intended use and is therefore not limiting. The method applied for providing latency independent coherence as recited in claim 53 is a statement of intended use and is not limiting.

6. As to claims 13-29, 49, and 51, the recited limitations are typical snooping system operations or configurations, and are disclosed or inherent to the system as cited hereinabove.

7. As to claims 59-60, and 83-93, responses are completed without regard to latencies as recited, since such dependency on latency is not described.

8. Claims 72 and 74-93 are rejected under 35 U.S.C. 102(b) as being anticipated by Neiger et al., US 6,112,283 (hereinafter "Neiger").

9. As to claims 72 and 74-93, Neiger discloses a memory controller coupled to a memory and plurality of agents, configured to receive memory requests, assign a global order thereto, execute according to the order a snoop corresponding to each request, and respond to each request according to the global order. See Neiger Summary, col. 4 lines 34-67 (global order is given to requests and they are responded to in order), col. 10 lines 43-59 (snoops are performed in node reception order), and col. 18 lines 54-56 (global order may be the same as node reception order). Neiger discloses ordering logic for establishing a global order for the requests as ordering buffer 62, Fig. 4, and col. 7 lines 8-11. Insuring that initiated snoops conform to the global order to the extent claimed, since their results are distributed in global order (col. 10). The various

dependent claim limitations including communicating queries, microprocessors/I/O devices, common and disparate buses, coherency, monitoring, etc. are disclosed in or inherent to the descriptions cited above.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2188

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary J Portka/

Primary Examiner

Art Unit 2188

April 11, 2008